

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims

Claim 1 (Currently Amended): A driver, comprising:

a rotor to which a magnet is fixed, adapted to be rotated with an axis portion as a center;

a bobbin including a first case and a second case;

a coil wound around the outer periphery of the bobbin to thereby fix the first case and the second case;

a first bearing for supporting one end of the axis portion of the rotor;

a second bearing for supporting the other end of the axis portion of the rotor, the first bearing and the second bearing ~~being formed in a bobbin~~ provided in the first case and the second case; and

a yoke arranged in a position shifted in a thrust direction with respect to the magnet,

wherein the axis portion of the rotor is biased in an axial direction of the rotor and in a radial direction of the rotor by a magnetic force acting between the yoke and the magnet, and

a fitted portion of the first bearing into which the axis portion is fitted is formed into a tapered shape and the fitted portion and the axis portion are in a relation of a line osculation, so as to prevent the axis portion of the rotor from being shifted in one direction of the radial direction of the rotor at the fitted portion of the first bearing by being biased in the radial direction.

Claim 2 (Original): A driver according to claim 1, wherein the portion of the first bearing into

which the axis portion is fitted has a conical shape.

Claim 3 (Original): A driver according to claim 1, wherein a portion of the axis portion which is fitted into the first bearing has one of a semi-spherical shape and a spherical shape.

Claim 4 (Original): A driver according to claim 1, wherein the portion of the first bearing into which the axis portion is fitted further has a shape for regulating a radial movement of the axis portion.

Claim 5-6 (Canceled)

Claim 7 (Currently Amended): A driver, comprising:

a rotor to which a magnet is fixed, adapted to be rotated with an axis portion as a center;

a bobbin including a first case and a second case;

a coil wound around the outer periphery of the bobbin to thereby fix the first case and the second case;

a first bearing for supporting one end of the axis portion of the rotor;

a second bearing for supporting the other end of the axis portion of the rotor, the first bearing and the second bearing ~~being formed in a bobbin~~ provided in the first case and the second case; and

a yoke arranged in a position shifted in a thrust direction with respect to the magnet,

wherein the axis portion of the rotor is biased in an axial direction of the rotor and in a radial direction of the rotor by a magnetic force acting between the yoke and the magnet, and

a fitting portion of the axis portion which is fitted into the first bearing is formed into a tapered shape and the fitted portion and the first bearing are in a relation of a line osculation, so as to prevent the axis portion of the rotor from being shifted in one direction of the radial

direction of the rotor at the fitted portion of the first bearing by being biased in the radial direction.

Claim 8 (Currently Amended): A device for adjusting a quantity of light, comprising:

a rotor to which a magnet is fixed, adapted to be rotated with an axis portion as a center;

a bobbin including a first case and a second case;

a coil wound around the outer periphery of the bobbin to thereby fix the first case and the second case;

a first bearing for supporting one end of the axis portion of the rotor;

a second bearing for supporting the other end of the axis portion of the rotor, the first bearing and the second bearing being formed in a bobbin provided in the first case and the second case; and

a yoke arranged in a position shifted in a thrust direction with respect to the magnet,

wherein the axis portion of the rotor is biased in an axial direction of the rotor and in a radial direction of the rotor by a magnetic force acting between the yoke and the magnet, and

a fitted portion of the first bearing into which the axis portion is fitted is formed into a tapered shape and the fitted portion and the axis portion are in a relation of a line osculation, so as to prevent the axis portion of the rotor from being shifted in one direction of the radial direction of the rotor at the fitted portion of the first bearing by being biased in the radial direction.

Claim 9 (Original): A device for adjusting a quantity of light according to claim 8, wherein the portion of the first bearing into which the axis portion is fitted has a conical shape.

Claim 10 (Original): A device for adjusting a quantity of light according to claim 8, wherein a

portion of the axis portion which is fitted into the first bearing has one of a semi-spherical shape and a spherical shape.

Claim 11 (Original): A device for adjusting a quantity of light according to claim 8, wherein the portion of the first bearing into which the axis portion is fitted further has a shape for regulating a radial movement of the axis portion.

Claim 12-13 (Canceled)

Claim 14 (Original): A device for adjusting a quantity of light according to claim 8, wherein the rotor is provided with a driving lever, and the driving lever is fitted into the member for adjusting a quantity of light.

Claim 15 (Previously Presented): A device for adjusting a quantity of light according to claim 8, wherein the first bearing is provided in a first case, the second bearing is provided in a second case, the first case and the second case constitute a bobbin, and the coil is wound around the bobbin.

Claim 16 (Original): A device for adjusting a quantity of light according to claim 9, wherein the conical shape is formed so as for an angle of its vertex to fall within the range of 90 to 110 degrees.

Claim 17 (Original): A device for adjusting a quantity of light according to claim 8, wherein a position of the rotor is detected by a Hall element.

Claim 18 (Currently Amended): A device for adjusting a quantity of light, comprising:

a rotor to which a magnet is fixed, adapted to be rotated with an axis portion as a center;

a bobbin including a first case and a second case;

a coil wound around the outer periphery of the bobbin to thereby fix the first case and

the second case;

a first bearing for supporting one end of the axis portion of the rotor;

a second bearing for supporting the other end of the axis portion of the rotor, the first bearing and the second bearing ~~being formed in a bobbin~~ provided in the first case and the second case; and

a yoke arranged in a position shifted in a thrust direction with respect to the magnet,

wherein the axis portion of the rotor is biased in an axial direction of the rotor and in a radial direction of the rotor by a magnetic force acting between the yoke and the magnet, and

a fitting portion of the axis portion which is fitted into the first bearing is formed into a tapered shape and the fitted portion and the first bearing are in a relation of a line osculation, so as to prevent the axis portion of the rotor from being shifted in one direction of the radial direction of the rotor at the fitted portion of the first bearing by being biased in the radial direction.